



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/585,619	06/02/2000	Joseph Nir		6870

7590

02/17/2004

Mark Friedman Ltd
C/o BILL POLKINGHORN-DISCOVERY DISPATCH.
9003 FLORIN WAY
UPPER MARLBORO, MD 20772

EXAMINER

BAYARD, EMMANUEL

ART UNIT	PAPER NUMBER
----------	--------------

2631

H

DATE MAILED: 02/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/585,619

Applicant(s)

NIR ET AL.

Examiner

Emmanuel Bayard

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7, 8, 12, 15-19, 22, 24-29, 31-36 and 39-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 7, 8, 12, 15, 25-29 and 44-49 is/are allowed.
- 6) ☒ Claim(s) 16 and 31 is/are rejected.
- 7) ☒ Claim(s) 17-19, 22, 24, 32-36 and 40-43 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This is in response to amendment filed on 12/16/03 in which claims 1-5, 7-8, 12, 15-19, 22, 24-29, 31-36, and 39-49 are pending. The applicant's amendments have been fully considered but they are moot based on the new ground of rejection.

Claim Objections

1. Claims 40 and 41 are objected to because of the following informalities: in line 21, after "and" delete "." respectively. Appropriate correction is required.
2. Claim 43 is objected to because of the following informalities: in line 22, replace "matrices" with ---matrix---. Appropriate correction is required.

Claim 42 is likewise objected because it depends on a based rejected claim.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371⁹ of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claim 16 is rejected under 35 U.S.C. 102(e) as being anticipated by Haartsen U.S. Patent No 6,028,853.

As per claim 16, Haartsen et al disclose a method for determining a pseudo ranges and a rate of change thereof to a beacon that transmits a signal including a plurality of blocks, each block including a plurality of frames of a pseudo noise sequence, each block being multiplied by a bit of a data sequence, the signal being shifted relative to a nominal frequency by a frequency shift, the method comprising the steps of: receiving the signal (see fig.6 element 74 and col.11, line 58 and col.12, lines 17-20); digitizing said received signal (see col.12, lines 56-67), thereby producing a digitized signal including a plurality of bits; for each beacon, multiplying groups of said bits of said digitized signal, that corresponds to the blocks of the signal transmitted by said each beacon, by respective bit of the data sequence of said each beacon (see col.8, lines 2-10 and col.12, lines 20-24).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the

Art Unit: 2631

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 31-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Haardt et al U.S. Patent No 6,353,732 B1.

As per claim 31, Haardt et al discloses a method for determining a pseudo ranges and a rate of change thereof to a beacon that transmits a signal including a plurality of blocks, each block including a plurality of frames of a pseudo noise sequence, each block being multiplied by a bit of a data sequence, the signal being shifted relative to a nominal frequency by a frequency shift, the method comprising the steps of: receiving the signal (see fig.1 and abstract and col.3, lines 3-5 and col.4, lines 53-55); digitizing said received signal (see fig.1 element A/D and col.4, lines 56-57), thereby producing a digitized signal including a plurality of bits; applying a matched filter algorithm to said digitized signal to extract the pseudo range and the rate of change of the pseudo range (see fig.1, and col.4, line 58 and col.6, lines 39-65 and col.13, lines 55-col.14, lines 1-65), said matched filter algorithm including: demodulating (see abstract and col.3, lines 8, 64) said digitized signal relative to the data sequence.

As per claims 32 and 33, Haardt et al inherently includes aligning the bits of the data sequence prior to said demodulation.

Allowable Subject Matter

3. Claims 17-19, 22, 24, 32-36, 40-43 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2631

4. Claims 1-5, 7-8, 12, 15, 25-29, 44-49 are allowed over the prior art of record.
5. The following is a statement of reasons for the indication of allowable subject matter: the prior arts of record fail to anticipate or render obvious the following recited features: arranging said digitized signal as columns of an input matrix that includes a plurality of rows, each said column including consecutive said bits of said digitized signal that correspond to an integral number of frames of the pseudo noise sequence and performing a discrete orthogonal transform on each said row of said input matrix, thereby producing a transformed matrix as recited in claims 1, 25, 26, 29, 39-49. Said column coordinate of said most likely peak then corresponding to the rate of change of the pseudo range as recited in claims 39-49.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Issler et al U.S. Patent No 5,995,040 teaches a global space radio positioning.

Bergman et al U.S. Patent No 6,043,777 teaches a method and apparatus for global positioning system.

Prigge U.S. Patent No 6,549,004 B1 teaches distributed magnetic field.

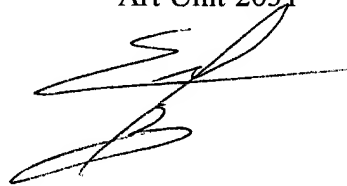
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is (703) 308-9573. The examiner can normally be reached on Monday-Thursday from 8:00 AM - 5:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on 703 306-3034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

2/12/04

Emmanuel Bayard
Examiner
Art Unit 2631

A handwritten signature in black ink, appearing to be 'E. Bayard', written over a horizontal line.